

CLAIMS

What is claimed is:

1. A method for operating a code division multiple access communications system, comprising:

within a coverage area of a base station, assigning a set of spreading codes to individual ones of a plurality of subscriber stations; and

during transmissions within the cell, periodically hopping amongst individual ones of the spreading codes of the set of spreading codes such that at any given time no two subscriber stations operate with the same spreading code.

2. A method as in claim 1, wherein the set of spreading codes comprises an all one's spreading code.

3. A method as in claim 1, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes, and further comprising assigning a non-hopped sub-set of the larger set of spreading codes to individual ones of said plurality of subscriber stations for use on a system access channel.

4. A method as in claim 1, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes, and further comprising assigning a non-hopped sub-set of the larger set of spreading codes to individual ones of said plurality of subscriber stations for use on a system control channel.

5. A method as in claim 1, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes, and further comprising assigning a non-hopped sub-set of the larger set of spreading codes to individual ones of said plurality of subscriber stations for use on a non-traffic channel.

6. A method as in claim 1, wherein the step of periodically hopping changes from a currently used spreading code to a next spreading code at a symbol rate or at a multiple of the symbol rate.

7. A method as in claim 1, wherein the system is a fixed data rate system.

8. A method as in claim 1, wherein the system is a variable data rate system.

9. A method as in claim 1, wherein the system is a variable data rate system and wherein the step of periodically hopping changes from a currently used spreading code to a next spreading code at the symbol rate, or at a multiple of the symbol rate of one of the lowest symbol rate users.

10. A method as in claim 1, wherein the system is a variable data rate system and wherein the step of periodically hopping changes from a currently used spreading code to a next spreading code at the symbol rate, or at a multiple of the symbol rate of the highest symbol rate users.

11. A code division multiple access communications system, comprising a controller operating within a coverage area of a base station for assigning a set of spreading codes to individual ones of a plurality of subscriber stations; and further comprising circuitry that is responsive to transmissions within the cell for periodically hopping amongst the set of spreading codes such that at any given time no two subscriber stations operate with the same spreading code.

12. A system as in claim 11, wherein the set of spreading codes comprises an all one's spreading code.

13. A system as in claim 11, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes, and where said controller further assigns a non-hopped sub-set of the larger set of spreading codes to individual ones of said plurality of subscriber stations for use on a system access channel.

14. A system as in claim 11, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes, and where said controller further assigns a non-hopped sub-set of the larger set of spreading codes to individual ones of said plurality of subscriber stations for use on a system control channel.

15. A system as in claim 11, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes, and where said controller further assigns a non-hopped sub-set of the larger set of spreading codes to individual ones of said plurality of subscriber stations for use on a non-traffic channel.

16. A system as in claim 11, wherein said circuitry changes from a currently used spreading code to a next spreading code at a symbol rate or at a multiple of the symbol rate.

17. A system as in claim 11, wherein the system is a fixed data rate system.
18. A system as in claim 11, wherein the system is a variable data rate system.
19. A system as in claim 11, wherein the system is a variable data rate system and wherein the step of periodically hopping changes from a currently used spreading code to a next spreading code at the symbol rate, or at a multiple of the symbol rate of the lowest symbol rate users.
20. A system as in claim 11, wherein the system is a variable data rate system and wherein the step of periodically hopping changes from a currently used spreading code to a next spreading code at the symbol rate, or at a multiple of the symbol rate of the highest symbol rate users.
21. A synchronous, direct sequence code division multiple access communications system, comprising a controller operating within a coverage area of a base station for assigning a set of spreading codes to individual ones of a plurality of subscriber stations; and further comprising circuitry that is responsive to transmissions within the cell for periodically hopping amongst the set of spreading codes at a symbol rate or a multiple of a symbol rate such that at any given time no two subscriber stations interfere with one another by the use of the same spreading code, wherein the set of spreading codes comprises a hopped sub-set of a larger set of spreading codes, and where said controller further assigns a non-hopped sub-set of the larger set of spreading codes to individual ones of said plurality of subscriber stations for use on at least one of a system access channel or a system control channel.
- 22 A system as in claim 21, wherein the set of spreading codes comprises an all one's spreading code.
23. A system as in claim 21, wherein the system operates as one of a fixed data rate system or as a variable data rate system.
24. A system as in claim 21, wherein the hops between spreading codes are made at a symbol boundary of all of the subscriber stations.